

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 2001118780
PUBLICATION DATE : 27-04-01

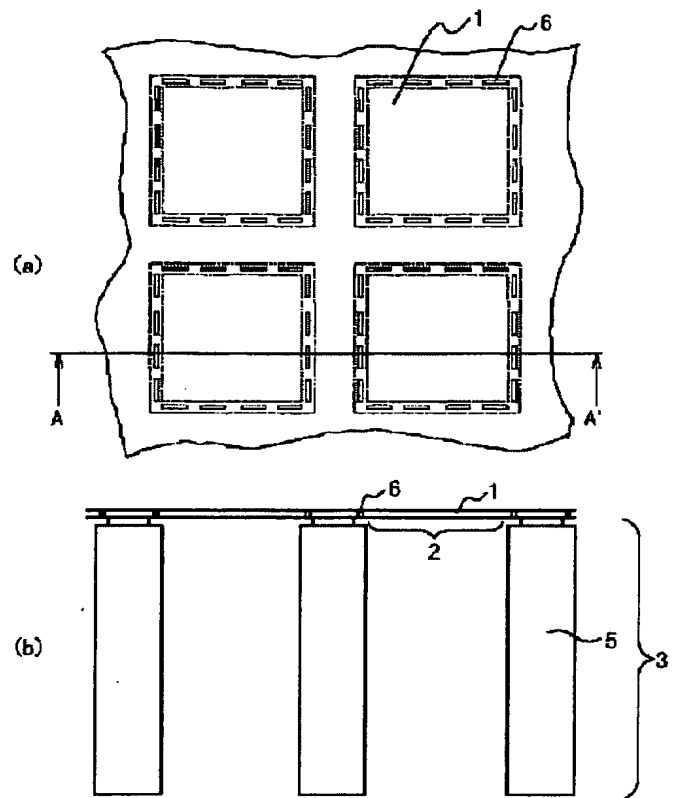
APPLICATION DATE : 20-10-99
APPLICATION NUMBER : 11297788

APPLICANT : NIKON CORP;

INVENTOR : KATAKURA NORIHIRO;

INT.CL. : H01L 21/027 G03F 1/16

TITLE : TRANSFER MASK BLANKS FOR ELECTRON BEAM, AND TRANSFER MASK FOR ELECTRON BEAM, AND THEIR MANUFACTURING METHOD



ABSTRACT : PROBLEM TO BE SOLVED: To provide a transfer mask blanks for an electron beam which does not have adverse effect on optical properties, without a region to form a circuit pattern becoming small even in the case that it is provided with a hole for release of stress of a membrane, and a transfer mask for an electron beam, and their manufacturing method.

SOLUTION: This is a transfer mask blank which is equipped with a membrane, a peripheral frame for supporting that membrane, fixing the periphery of the membrane, and a pole for supporting that membrane and diving it into regions including a plurality of small regions, and this is a transfer mask where the said pole has at least two-layer structure, and the width of the pole of the layer which is nearest to the said membrane is narrower than the width of the pole of other layer, and a hole for release of stress is made in the membrane region outside the said small region being made by narrowing the width of the pole in the said nearest layer more than the width of the pole in other layer.

COPYRIGHT: (C)2001,JPO